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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/003,047	01/05/98	VAN OUYEN	A 261922003302

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HM12/0315

EXAMINER

ZAGHMOUT, O

ART UNIT

PAPER NUMBER

1649

DATE MAILED:

03/15/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/003,047

Applicant(s)
Van Ooyen et al.

Examiner
Ousama Zaghmout

Group Art Unit
1638



☒ Responsive to communication(s) filed on Aug 19, 1999

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire three month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1, 27, 28, 42, 48, 51, and 54-58 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1, 27, 28, 42, 48, 51, and 54-58 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

Art Unit: 1638

STATUS OF APPLICATION

1. The Group and/or Art Unit location of your application in the PTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Group Art Unit 1638.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. The finality of the Office action mailed 06-28-1999 has been withdrawn in view of the new grounds of rejections.
4. The amendment filed 18-19-1999 has been received and entered (Paper No. 12).

Status of the claims:

Claims 1, 56, 58 have been amended.

Claims 19-23, 33-36, 38-39, 41, 44, 47, 50, and 53 have been canceled.

Claims 1, 27-28, 42, 48, 51, and 54-58 are pending.

5. The disclosure is objected to because of the following informalities:

Claim 54, line 2, "an endo-microbial glucanase" should be --microbial endo-glucanase--.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

Ist paragraph

Art Unit: 1638

Claims 1, 27-28, 42, 48, 51, and 54-58 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Applicants claim a method for modifying carbohydrate composition in any transgenic plant or plant organ by stably expressing any expression construct containing any microbial endo-glucanase under a 35S CaMV promoter. However, the specification does not teach those skilled in the art how to identify, characterize and test the nucleotide sequences encompassed by these claims. The specification does not teach if the nucleotide sequence from every microbe is identical, or if all nucleotide sequences of all microbial origin have a common chemical property or physical characteristics. The specification does not teach those skilled in the art any step on how the mutagenesis, modification, the alteration of the coding sequence around the translation initiation site to accommodate Kozak consensus sequence will be performed. The instant disclosure fails to teach the factors which are essential for successfully expressing a glucanase gene of microbial origin. Furthermore, modification of the coding sequence to enhance the expression of non-plant gene in plants requires many steps which they have not be addressed in the instant disclosure which include: changes in the localization of the regions of A+T richness to resemble the plant introns, and the optimization

Art Unit: 1638

of the potential plant polyadenylation signal sequences, ATTTA sequences to avoid any destabilization of the mRNA in the plant.

Furthermore, the process of transforming plants with individual genes to obtain desired phenotypes is unpredictable. In that respect, Kossmann et al teach that the starch content remains unaltered when the cDNA encoding granule-bound starch synthase (GBSSI) was expressed in reverse orientation in transgenic potato plants (paragraph 5, page 275). In addition, the amylose content, chain length of the starch remain unaltered. Finally, no difference in the gelatinization and gelatine characteristics can be observed (Progress in Biotechnology-10. Proceeding of International Conference which was held 4-23-1995 to 4-26-1995).

The Examiner would like to bring to the attention of the Applicants that the expression of a transgene does not depend only on the integration into the host genome, said transgene has to be activated which is then has to go through a number of steps such as the initiation of transcription, transcript process, transport to cytoplasm and translation of mRNA. As such, the obtention of a transgenic plant with a desirable phenotype is unpredictable. While Applicants may be able to obtain a transgenic plant that has a transgene, but this does not mean that the desirable trait will be obtained as discussed supra. Applicants have failed to address many of other important issues which are essential for the enablement of the invention as broadly claimed in the instant application. Applicants have provided no specific guidance as to how to select the nucleotide sequences or sub-nucleotide sequence which will produce a protein or a polypeptide to impair cellular function. One wishing to practice the invention is

Art Unit: 1638

left to proceed through trial-and-error to see what will work and what will not. Hence, due to the lack of any working examples of the inventions, and the inability of one skilled in the art to predict which if any of all possible proteins which will be useful in the manner suggested, and the unpredictability of the field, it would require undue experimentation to practice the invention.

Conclusion

No claims are allowed.

Art Unit: 1638

Future Correspondence

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Ousama M-Faiz Zaghmout whose telephone number is (703) 308-9438. The Examiner can normally be reached Monday through Friday from 7:30 am to 5:00 pm (EST).

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, L. Smith, can be reached on (703) 308-3909. The fax phone number for the group is (703) 305-3014.

Any inquiry of a general nature or relating to the status of this application should be directed to THE MATRIX CUSTOMER SERVICE CENTER whose telephone number is (703) 308-0196.

Ousama M-Faiz Zaghmout Ph.D.

March 13, 2000

ELIZABETH F. McELWAIN
PRIMARY EXAMINER
GROUP 1800

E. F. McElwain